
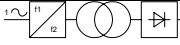











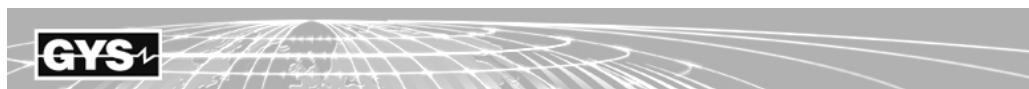


## X / MEANING OF INDICATIONS AND MARKINGS

A	AmpS	I <sub>1eff</sub>	Maximum network effective power supply
V	Volts	U <sub>1</sub>	Network voltage
Hz	Hertz	EN 60 974-1	The device complies with EN60974-1 standard relative to welding units.
	Electrode welding (MMA – Manual Metal Arc)		Single phase inverter, converter-rectifier
	Tungsten Inert gas(Tig).	X ...% ...% ...%	X : operating factor at 45%, 60% and 100 %
	Protection against enlarged risks of electric shock	I <sub>2</sub> ...A ...A ...A	I <sub>2</sub> : corresponding currents
	The welding current is alternative in Tig AC.	U <sub>2</sub> ...v ...v ...v	U <sub>2</sub> : conventional voltages in corresponding load
	Welding direct current		Fan
IP..	21 : Protected against rain and against fingers access to dangerous parts		Complies with GOST Norms (Russia)
U <sub>0</sub>	Rated no-load voltage		Caution, welding can produce fire or explosion.
	Single phase power supply 50 or 60Hz	CE	The device complies with European Directive
	The electric arc produces dangerous rays for eyes and skin (protect yourself !)		Caution ! Read the user manual
I <sub>1max</sub>	Maximum mains current (effective value)		Separate collection required – Do not throw in a domestic dustbin



Declaration of conformity : The equipment presented in this user manual complies with EEC Directives 83/336 (Electromagnetic compatibility) and 73/23 (low voltage) for professional or experienced use.  
This conformity is established in compliance with EN 60974-1 and A1/A2 of 2003 (Low Voltage Directive) and EN 50199 (Electromagnetic compatibility Directive)

**GYSMI TIG 143 HF DV**

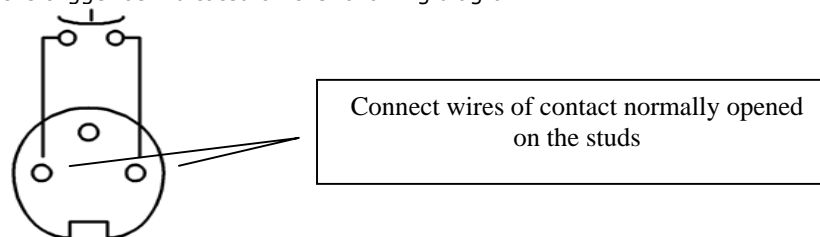
## I / POWER SUPPLY – STARTING

- This product is delivered without plug. You can connect it either on 115V + earth or 230V + earth (16A/230V - 32A/115V).
- This product is protected against over voltage or under voltage which are the result of the normal fluctuation of the mains supply or of a power plant.
- Your unit has a small switch on the front face and you have 3 modes of welding respectively :

✓ TIG TSL – MMA Electrode – TIG HF.

➤ Connect the trigger plug:

The TIG 143 DV HF without accessories is delivered with the connector of command of the trigger as indicated on the following diagram:



## II / ELECTRODES WELDING (from 10 A to 120 A)

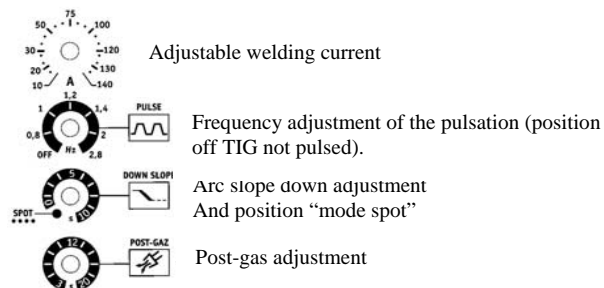
- Please follow standard rules for welding.
- After welding, leave the machine connected for cooling.
- Thermal protection: the indicator light comes on and cooling time is about 5 min.

Your unit is equipped with 3 special Inverter functions: Hot START gives arcing overcurrent about 25% more than the displayed setting; Arc force provides an overcurrent about 15% more than the setting to avoid sticking when the electrode enters the bath; and Anti-sticking lets you separate the electrode easily without reddening in case it sticks.

### III/ WELDING PARAMETERS

électrode diameter (mm)	I min	I avg	I max	Power generating set
1,6	30	40	50	
2	45	55	80	
2,5	70	80	95	4,5 KVA
3,2	100	110	130	5,5 KVA

### IV / WELDING TIG HF (de 10 A à 140 A)



- When you press on the trigger, a H.F signal allows remote starting between the electrode and the part to be welded (use under gas Argon).
- You can regulate the slope down of the arc from 0 to 10 seconds and post-gas from 3 to 5 seconds.

### V / TSL TIG WELDING (from 10 A to 140 A)

- It is system of striking device without high frequency in TIG:
  - ➔ T = Touch : touch the electrode on the part to be welded
  - ➔ S = Switch : press on the trigger
  - ➔ L = Lift : raise the electrode before a lapse of time of two seconds
- The adjustments of post-gas and the slope down of arc are the same ones as above.

### VI / PULSED TIG WELDING

- In order to weld in this type of welding, you must adjust the "pulsed" potentiometer between 0.8 and 2.8 Hz (0.8Hz for a maximum timing between each pulsation and 2.8 Hz for a minimum timing between each pulsation).

### VII / "MODE SPOT" in TIG HF or TSL

- This type of product is able to do spot welding (potentiometer switch "pulsed" in position off and potentiometer switch "Down slope" in spot position). You can work quickly with this mode.

### VIII / TROUBLES SHOOTING

If, when you are ready to weld, the unit does not supply any current, check the following points:

A – Both indicator lights are on: Wait for the end of the cooling period.

B – The on / off switch is on 1, nothing's matter.

If when you put your hand on the outer casing, you feel tingling while the machine is on, this means that the earthing is defective. Check the extension cable, the plug and the earth to your installation;

### IX / MAINTENANCE

- The maintenance must be done by a professional.
- Disconnect the generator and wait until the ventilator stopped before working on the unit. Inside the device, voltages and current are dangerous.
- Regularly remove the steel cover and blow off the dust with compressed air. Check the electrical connections with an insulated tool.

### X / ADVICE

- Respect welding polarities and currents indicated on the electrode packaging
- Remove the electrode from the electrode holder when you do not use it.
- Leave the inlets free to allow in/out air circulation.
- Remove the dust from the device regularly with an air gun after disconnection.
- Control regularly the state of the mains cable. Change it if damaged.

### XI / SECURITY

**The arc welding can be dangerous and leads serious injury, may fatal. Protect yourself and protect the others.**

*Take protections against :*

- **arc emissions** : Protect yourself thanks to an electronic welding helmet in compliance with EN 175, supply with filters in compliance with EN 169 or EN 379.
- **Rain, steam, humidity**  
Select a clean environment to use your product (degree of pollution  $\leq 3$ ), on the even place and put the machine at least one meter from the part to be welded.
- **Electric shock** : This unit has to be used on a single-phase power supply, with 3 wires, with neutral connected to the earth. Do not touch the parts under voltage. Check that the supply system is well adapted to the unit.
- **Drop** : Do not carry it over the people or things and do not drop it.
- **Burns** : Wear protective or fire-proof clothing (overalls, jeans).  
Use some welder gloves and a fire-proof apron.  
Protect the others by installing non flammable protection wall , or prevent the others to not look at the arc and to keep a sufficient distance
- **Fire risks** : Suppress all flammable products from the working area. Do not works near flammable gas.
- **Smokes** : Do not inhale gas or welding smokes, use adapted extractors

Do not use this unit near people using Pacemaker.

Do not use the unit to thaw tubing.

In TIG welding, manipulate the gas bottle carefully. Indeed, there are risks if the bottle or the bottle valve are damaged.